REMARKS

Reconsideration of the above-identified application is respectfully requested in view of the foregoing amendments and the following remarks.

Summary of the Application

Claims 1, 2, 4-6 and 8-17 are pending in the application. Of these claims, claims 1, 2, 4-6 and 8-10 are amended, and claims 11-17 are new. Claims 3 and 7 are canceled without prejudice, and are submitted in independent form as new claims 16 and 17. The amended claims and other new claims are supported by the specification and claims as filed.

Summary of the Office Action

The Office Action dated March 22, 2005, is non-final. The Office Action advises that claims 9 and 10 are allowable, and that claims 3 and 7 are objected to as depending from a rejected claim, but are otherwise allowable. Several rejections and objections of the pending claims are set forth therein.

Claims 1 and 5 are rejected under 35 U.S.C. § 112, ¶ 2, as failing to particularly point out and distinctly claim the subject matter applicants regard as their invention due to their inclusion of the term "integer." As an integer "is any positive number, and negative number and zero," clarification is required. Further, the Office Action gave no weight to the preamble language "not perforating" because it is not included in the body of the claims. Applicants also acknowledge the comments concerning claims 9 and 10.

Claims 1 and 5 are further rejected under 35 U.S.C. § 102(b) as anticipated by JP (sic) 0 500 334 A2 to Hasegawa et al. ("Hasegawa"). Applicants submit that the reference should have been identified as EP 0 500 334 A2.

Claims 2 and 6 are rejected under 35 U.S.C. § 103(a) as obvious over Hasegawa in view of JP 580 893 83A to Katayama Hirohiko ("Hirohiko"). Hasegawa is said to disclose all the limitations of these claims except "wherein said thermal head printer comprises a replaceable thermal head or set of thermal heads." Hirohiko, it is asserted, discloses same; the Office Action contends that it would have been obvious to one skilled in the art to use a replaceable thermal head as taught by Hirohiko in Hasegawa "for the purpose of obtaining a constant printing density all the time when thermal heads are exchanged."

Claims 4 and 6 are rejected under 35 U.S.C. § 103(a) as obvious over Hasegawa in view of U.S. Patent 4,841,120 to Yagino et al. ("Yagino"). Hasegawa is argued to disclose all claimed limitations with the exception of "wherein said substantially rectangular heating

element is a split resistor." Yagino is said to disclose the use of such an element for the "purpose of assuring high quality printing." The Office Action therefore concludes that it would have been obvious to use the Yagino heating element in Hasagawa.

Discussion

At the outset, applicants have addressed the objection to claims 1 and 5 by limiting "n" as recited therein to integers that are greater than zero.

One skilled in the art, upon reading the specification, would appreciate that the value "n" is an integer greater than zero. For example, it would be illogical for one to conclude that the thermal head printer for printing, as described and claimed in the pending application, included either zero (or less than zero—assuming one can even conceive of such a device), thermal heads. Indeed, it is not only logical, but consistent with the specification as filed, for one to conclude that there must be at least one or more (i.e., wherein n is an integer greater than zero) thermal heads in the thermal head printer. *See, e.g., page 10, lines 1-14, wherein multiple thermal heads are disclosed.* Indeed, in the absence of any heads, the thermal head printer disclosed and claimed would not be able to image-wise print the substantially light-insensitive thermographic material. As the amendments to claims 1 and 5 clarifies the subject matter applicants consider to be their invention, address the objection, and add no new matter to the specification and claims, withdrawal of the objection is respectfully requested.

Turning to the substantive rejections, applicants note that Hasegawa has been used in the Office Action to support an anticipation rejection relative to claims 1 and 5.

Hasegawa, as discussed at pages 2 and 3 of the pending application, is directed to a thermal recording device for providing dot matrix images. In marked contrast, the claimed invention does not relate at all to dot matrix printers, but to printers that provide continuous tone images—as referred to as image-wise printing. By way of example, embodiments of the invention are desirably used for medical imaging, where obtaining a continuous tone image is critical. The specification, for instance, contains examples in which a DRYSTAR 3000 printer is used. This printer is known to those skilled in the art as one that utilizes image-wise printing, providing continuous tone images. Further, film used in these examples, SCOPIX™ LT2B, is known to those skilled in the art as useful in image-wise printing, as this film provides continuous tone images. Dot matrix printers, such as those described in

Hasegawa, provide images that are different than, and generally thought to be inferior to, continuous tone images in medical applications.

Moreover, the claimed invention is not directed to printers or processes for their use in which the material transported therethrough is perforated.

As the claimed invention is not disclosed or taught by Hasegawa, withdrawal of the rejection on this basis alone is appropriate and requested.

Further, Hasegawa also refers to, but does not explicitly define, the term "pitch." More specifically, when discussing its dot matrix printers, Hasegawa references at least two possible meanings for the term "pitch": the pitch of the dots in the dot pattern created on a material by the dot matrix printer, and the pitch of the heating elements in the thermal head. However, as a consequence of having only a single row of heat emitting elements, the term "pitch" as used in Hasegawa cannot, and does not, disclose or teach the same type of "pitch" associated with the heating elements in the secondary scanning direction. For this reason, and for the sake of internal consistency, the term "pitch" as used in Hasegawa more properly refers to the pitch of the dots in the dot matrix image. Therefore, as Pa relates to the pitch of the dots in the image, the term b/Pa disclosed in Hasegawa is unrelated to the term L_n/P_n used in the claimed invention. As a result, Hasegawa does not disclose the invention as claimed.

To the extent it is argued that the term "pitch" in Hasegawa is the pitch of the heating elements, applicants note that new claims 11 and 13 require, in addition to other limitations, "n thermal heads, wherein n is greater than zero, each of said thermal heads comprising an array of substantially rectangular energizable heating elements, each element comprising a resistor, said heating elements having a length L_n in said transport direction and a pitch P_n between adjacent heating elements," and that "the width of a space between adjacent resistors along a line in the plane of said heating elements which bisects all the heating elements is 20% or less of P_n." That these claims require the aforesaid ratio is clearly outside any range that arguably may be said to be disclosed or taught by Hasegawa.

Conclusion

Applicants consider the application to be in proper condition for allowance, and respectfully request that it be passed to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

Christopher T. Griffith, Reg. No. 33,392
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
180 North Stetson Avenue
Chicago, Illinois 60601-6780
(312) 616-5600 (telephone)
(312) 616-5700 (facsimile)

Date: September 21, 2005